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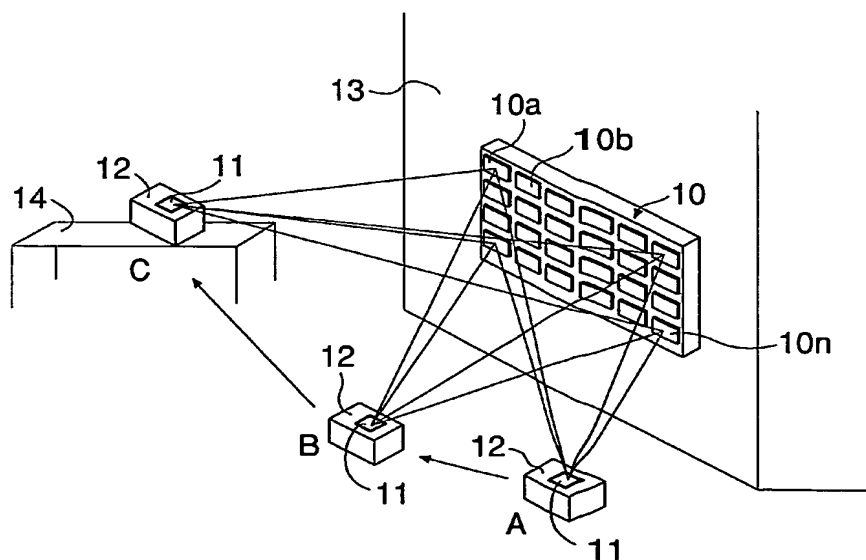
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(54) Title: METHOD OF AND APPARATUS FOR LONG DISTANCE READING OF PASSIVE TAGS IN RADIO FREQUENCY IDENTIFICATION SYSTEMS



(57) Abstract: A method and an apparatus for reading passive tags (11) affixed to objects (12) to be identified and tracked by a radio frequency identification system are disclosed. An interrogating station sends radio-frequency inquiry signals towards the passive tags (11) through an antenna array (10) and receives the response signals from the tags (11) through the same array (10). Electronic circuitry (20-25) for processing such response signals comprises a phase conjugator (23) submitting each received signal to phase conjugation, and the phase-conjugated signals are back transmitted to the passive tags (11). Retrodirectivity of the antenna array obtained through the phase conjugation allows a precise object identification and tracking also at relatively long distances.



TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

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